

For Soil Subgrade Modulus ...

Soil Subgrade Modulus = K= Pressure/deformation

Pressure= Allowable bearing pressure

Deformation = Allowable settlement in the foundation

For example

Allowable Bearing pressure is **200 kPa** and allowable settlement **is 25 mm**.

The Soil Subgrade modulus will be

$$K = \frac{200}{(25)/1000} = 8000 \text{ kN/m}^3 \quad \text{or } 8000 \text{ kPa/m}$$

CHECKS

Pressure under footing < 200 kPa (OK)

Deformation under footing < 25 mm (OK)

Punching Shear Check < 1 (OK)

[Preferable

should be less than
0.9]

Tips-

If you are failing in any check, go towards for the change in..... the inputs..... ...like change geometry (Length, width and thickness of the footing) and material property etc.

Note:

Allowable settlement for Isolated Footing = 25 mm

Allowable settlement for MAT/RAFT = 50 mm